In the Claims:

Please cancel claims 29, 58 and 59 and amend claims 1-3, 5-9, 13-14, 16-19, 22-28, 30, 35, 37, 39-41, 44-47, 49, 51-54, 57, 60, 63, 65-69, 71 and 72 as follows. Following is a complete listing of the claims pending in the application, as amended:

1. (Currently amended) An apparatus for processing a microelectronic workpiece, comprising:

a ~~disposition~~ deposition unit configured to receive the microelectronic workpiece and ~~dispose~~ deposit a layer of material on the microelectronic workpiece;

a metrology unit configured to receive the microelectronic workpiece, the metrology unit being configured to detect a condition of a layered portion of the microelectronic workpiece and transmit a condition signal representative of the condition;

a stripping unit configured to receive the microelectronic workpiece and chemically strip at least part of the layered portion from the microelectronic workpiece, the stripping unit including:

a rotor motor; and

a workpiece housing connected to the rotor motor for rotation, the workpiece housing defining an at least approximately closed processing space coupleable to sources of one or more processing fluids to distribute the one or more processing fluids across at least one face of the workpiece ~~by centripetal acceleration as the housing rotates~~;

a transport unit positioned to move the microelectronic workpiece to the stripping unit; and

a control unit operatively coupled to at least the metrology unit and at least one of the transport unit and the stripping unit, the control unit being configured to receive the condition signal and, based on the condition signal, transmit at least one of a first transmitted signal and a second transmitted signal, the first transmitted signal being configured to direct

the transport unit to move the microelectronic workpiece to the stripping unit, the second transmitted signal being configured to influence a process carried out by the stripping unit.

2. (Currently amended) The apparatus of claim 1 wherein the microelectronic workpiece is a first microelectronic workpiece, and wherein the control unit is operatively coupled to the ~~disposition~~ deposition unit to influence a ~~disposition~~ deposition process carried out by the deposition ~~disposition~~ unit on at least one of the first microelectronic workpiece and a second microelectronic workpiece subsequently received at the deposition ~~disposition~~ unit.

3. (Currently amended) The apparatus of claim 1 wherein the metrology unit is positioned external to a housing that at least partially encloses at least one of the deposition ~~disposition~~ unit and the stripping unit.

4. (Original) The apparatus of claim 1, further comprising at least one of:

a seed layer enhancement unit configured to receive the microelectronic workpiece and enhance characteristics of a seed layer disposed on the microelectronic workpiece;

a non-compliance unit configured to receive and support the microelectronic workpiece without changing the condition of the microelectronic workpiece when the condition of the layered portion of the microelectronic workpiece is outside a tolerance range;

an annealing unit configured to receive the microelectronic workpiece and anneal at least a portion of the microelectronic workpiece; and

a pre-align unit configured to rotationally align the microelectronic workpiece.

5. (Currently amended) The apparatus of claim 1 wherein the metrology unit is configured to detect a condition of a layer ~~disposed~~ deposited by the deposition ~~disposition~~ unit.

6. (Currently amended) The apparatus of claim 1 wherein the deposition ~~disposition~~ unit is configured to ~~dispose~~ deposit at least one of a seed layer and a blanket layer on the microelectronic workpiece.

7. (Currently amended) The apparatus of claim 1 wherein the stripping unit includes:

a rotatable support member;

an upper chamber member having a first fluid inlet; and

a lower chamber member having a second fluid inlet and being coupled to the upper chamber member to define a substantially closed processing chamber configured to receive the microelectronic workpiece when the microelectronic workpiece is carried by the support member, the processing chamber having a peripheral region with a fluid outlet positioned to receive fluid ~~centripetally accelerated~~ having a centrifugal force imparted to it by contact with the microelectronic workpiece.

8. (Currently amended) The apparatus of claim 1 wherein the deposition ~~disposition~~ unit is configured to ~~dispose~~ deposit a layer of material by at least one of an electrochemical process, an electrolytic process and an electroless process.

9. (Currently amended) An apparatus for processing a microelectronic workpiece, comprising:

a ~~disposition~~ deposition unit configured to receive the microelectronic workpiece and ~~dispose~~ deposit a layer of material on the microelectronic workpiece, the ~~disposition~~ deposition unit including a reaction vessel, the reaction vessel having:

an outer container having an outer wall;

a first outlet configured to introduce a primary flow into the outer container;

at least one second outlet configured to introduce a secondary flow into the outer container separate from the primary flow;

a dielectric field shaping unit in the outer container coupled to the second outlet to receive the secondary flow, the field shaping unit being configured to contain the secondary flow separate from the primary flow through at least a portion of the outer container, and the field shaping unit having at least one electrode compartment through which the secondary flow can pass while the secondary flow is separate from the primary flow; and

an electrode in the electrode compartment; further comprising:

a metrology unit configured to receive the microelectronic workpiece, the metrology unit being configured to detect a condition of a layered portion of the microelectronic workpiece and transmit a condition signal representative of the condition;

a transport unit positioned to move the microelectronic workpiece to the ~~disposition~~ deposition unit; and

a control unit operatively coupled to the metrology unit and at least one of the ~~disposition~~ deposition unit and the transport unit, the control unit being configured to receive the condition signal and, based on the condition signal, transmit at least one of a first transmitted signal and a second transmitted signal, the first transmitted signal being configured to direct the transport unit to move the microelectronic workpiece to the ~~disposition~~ deposition unit, the second transmitted signal being configured to influence a process carried out by the ~~disposition~~ deposition unit.

10. (Original) The apparatus of claim 9, further comprising a primary flow guide including:

a first baffle having a plurality of first apertures through which at least the primary flow can pass; and

a second baffle downstream from the first baffle, the second baffle having a plurality of second apertures through which the primary flow can pass after passing through the first apertures.

11. (Original) The apparatus of claim 9 wherein the field shaping unit includes:

a first annular wall in the outer container centered on a common axis, the first annular wall being spaced radially inward of the outer wall,

a second annular wall in the outer container concentric with first annular wall and between the first annular wall and the outer wall, wherein an inner surface of the second annular wall defines an outer side of a first electrode compartment and an outer surface of the second annular wall defines an inner side of a second electrode compartment, and

a virtual electrode unit having a first partition and a second partition, the first partition having a first lateral section coupled to the first and second annular walls and a first annular lip projecting from the first lateral section to define an interior flow path for the primary flow, and a second partition having a second lateral section above the first lateral section and a second annular lip projecting from the second lateral section, the second annular lip surrounding the first annular lip to define an annular opening therebetween;

and wherein the apparatus further comprises a first annular electrode in the first electrode compartment and a second annular electrode in the second electrode compartment.

12. (Original) The apparatus of claim 9, further comprising a primary flow guide including:

an annular outer baffle centered on a common axis, the outer baffle having a plurality of first apertures; and

an annular inner baffle positioned concentrically inside the outer baffle, the inner baffle having a plurality of second apertures, wherein the primary flow passes through the first apertures of the outer baffle and then through the second apertures of the inner baffle.

13. (Currently amended) The apparatus of claim 9 wherein the microelectronic workpiece is a first microelectronic workpiece, and wherein the control unit is operatively coupled to the ~~disposition~~ deposition unit to influence a ~~disposition~~ deposition process carried out by the ~~disposition~~ deposition unit on at least one of the first microelectronic workpiece and a second microelectronic workpiece subsequently received at the ~~disposition~~ deposition unit.

14. (Currently amended) The apparatus of claim 9 wherein the metrology unit is positioned external to a housing that at least partially encloses ~~at least one of~~ the ~~disposition~~ deposition unit ~~and the seed layer enhancement unit~~.

15. (Original) The apparatus of claim 9, further comprising at least one of:

a stripping unit configured to receive the microelectronic workpiece and chemically strip at least part of the layered portion from the microelectronic workpiece;

a seed layer enhancement unit configured to receive the microelectronic workpiece and enhance characteristics of a seed layer disposed on the microelectronic workpiece;

a non-compliance unit configured to receive and support the microelectronic workpiece without changing the condition of the microelectronic workpiece when the condition of the layered portion of the microelectronic workpiece is outside a tolerance range;

an annealing unit configured to receive the microelectronic workpiece and anneal at least a portion of the microelectronic workpiece; and

a pre-align unit configured to rotationally align the microelectronic workpiece.

16. (Currently amended) The apparatus of claim 9 wherein the metrology unit is configured to detect a condition of a layer ~~disposed~~ deposited by the ~~disposition~~ deposition unit.

17. (Currently amended) The apparatus of claim 9 wherein the ~~disposition~~ deposition unit is configured to ~~dispose~~ deposit at least one of a seed layer and a blanket layer on the microelectronic workpiece.

18. (Currently amended) The apparatus of claim 9 wherein the ~~disposition~~ deposition unit is configured to ~~dispose~~ deposit a layer of material by at least one of an electrochemical process, an electrolytic process and an electroless process.

19. (Currently amended) An apparatus for processing a microelectronic workpiece, comprising:

a ~~disposition~~ deposition unit configured to receive the microelectronic workpiece and ~~dispose~~ deposit a layer of material on the microelectronic workpiece, the ~~disposition~~ deposition unit including:

a principal fluid flow chamber;

a plurality of concentric ~~anodes~~ electrodes disposed at different elevations in the principal fluid flow chamber so as to place the concentric ~~anodes~~ electrodes at different distances from a microelectronic workpiece under process; and

a controller configured to deliver through ~~each of~~ the individual concentric ~~anodes~~ electrodes a current that is (a) based upon a current delivered through the concentric ~~anode~~ electrode to process an earlier-processed microelectronic workpiece and (b) selected to produce a more uniform processing of the workpiece under process than the processing of the earlier-processed microelectronic workpiece, the apparatus further comprising:

a metrology unit configured to receive the microelectronic workpiece, the metrology unit being configured to detect a condition of a layered portion of the microelectronic workpiece and transmit a condition signal representative of the condition;

a transport unit positioned to move the microelectronic workpiece to the ~~disposition~~ deposition unit; and

a control unit operatively coupled to the metrology unit and at least one of the ~~disposition~~ deposition unit and the transport unit, the control unit being configured to receive the condition signal and, based on the condition signal, transmit at least one of a first transmitted signal and a second transmitted signal, the first transmitted signal being configured to direct the transport unit to move the microelectronic workpiece to the ~~disposition~~ deposition unit, the second transmitted signal being configured to influence a process carried out by the ~~disposition~~ deposition unit.

20. (Original) The apparatus of claim 19 wherein the sensitivity values are logically arranged within the control system as one or more Jacobian matrices.

21. (Original) The apparatus of claim 19 wherein the at least one user input parameter comprises the thickness of a film that is to be electrochemically deposited on the at least one surface of the microelectronic workpiece.

22. (Currently amended) The apparatus of claim 19 wherein the individual electrodes are independently connected to the controller~~electrodes are arranged concentrically with respect to one another~~.

23. (Currently amended) The apparatus of claim 19 wherein the microelectronic workpiece is a first microelectronic workpiece, and wherein the control unit is operatively coupled to the ~~disposition~~ deposition unit to influence a ~~disposition~~ deposition process carried out by the ~~disposition~~ deposition unit on at least one of the

first microelectronic workpiece and a second microelectronic workpiece subsequently received at the ~~disposition~~ deposition unit.

24. (Currently amended) The apparatus of claim 19 wherein the metrology unit is positioned external to a housing that at least partially encloses at least one of the ~~disposition~~ deposition unit ~~and the seed layer enhancement unit~~.

25. (Currently amended) The apparatus of claim 19, further comprising at least one of:

a stripping unit configured to receive the microelectronic workpiece and chemically strip at least part of the layered portion from the microelectronic workpiece;

a seed layer enhancement unit configured to receive the microelectronic workpiece and enhance characteristics of a seed layer ~~disposed~~ deposited on the microelectronic workpiece;

a non-compliance unit configured to receive and support the microelectronic workpiece without changing the condition of the microelectronic workpiece when the condition of the layered portion of the microelectronic workpiece is outside a tolerance range;

an annealing unit configured to receive the microelectronic workpiece and anneal at least a portion of the microelectronic workpiece; and

a pre-align unit configured to rotationally align the microelectronic workpiece.

26. (Currently amended) The apparatus of claim 19 wherein the metrology unit is configured to detect a condition of a layer ~~disposed~~ deposited by the ~~disposition~~ deposition unit.

27. (Currently amended) The apparatus of claim 19 wherein the ~~disposition~~ deposition unit is configured to ~~dispose~~ deposit at least one of a seed layer and a blanket layer on the microelectronic workpiece.

28. (Currently amended) The apparatus of claim 19 wherein the ~~disposition~~ deposition unit is configured to ~~dispose~~ deposit a layer of material by at least one of an electrochemical process, an electrolytic process and an electroless process.

29. (Cancelled)

30. (Currently amended) An apparatus for processing a microelectronic workpiece, comprising:

a ~~disposition~~ deposition unit configured to receive the microelectronic workpiece and ~~dispose~~ deposit a layer of material on the microelectronic workpiece;

a metrology unit configured to receive the microelectronic workpiece, the metrology unit being configured to detect a condition of a layered portion of the microelectronic workpiece and transmit a condition signal representative of the condition;

an annealing unit configured to receive the microelectronic workpiece and process the microelectronic workpiece at an elevated temperature, the annealing unit including:

an apparatus support;

a heat source supported by the apparatus support;

a workpiece support positioned proximate to the heat source to engage and support the microelectronic workpiece relative to the heat source; and

a heat sink ~~proximate to the heat source and~~ positioned to selectively transfer heat from ~~the heat source to cool the heat source and~~ the microelectronic workpiece, the apparatus further comprising:

a transport unit positioned to move the microelectronic workpiece to the annealing unit;

a control unit operatively coupled to at least the metrology unit and at least one of the transport unit and the annealing unit, the control unit being configured to receive the condition signal and, based on the condition

signal, transmit at least one of a first transmitted signal and a second transmitted signal, the first transmitted signal being configured to direct the transport unit to move the microelectronic workpiece to the ~~disposition~~ deposition unit, the second transmitted signal being configured to influence a process carried out by the annealing unit.

31. (Original) The apparatus of claim 30 wherein the workpiece support is movable relative to the heat source between a first position with the microelectronic workpiece contacting the heat source and a second position with the microelectronic workpiece spaced apart from the heat source.

32. (Original) The apparatus of claim 30 wherein the heat sink includes a passive conduction heat sink having no cooling fluid links coupled thereto.

33. (Original) The apparatus of claim 30 wherein at least one of the heat sink and the heat source is movable relative to the other between an engaged position with the heat sink engaged with the heat source and a disengaged position with the heat sink spaced apart from the heat source.

34. (Original) The apparatus of claim 30 wherein the heat sink is a first heat sink and the engaged position is a first engaged position, and wherein the apparatus further comprises a second heat sink spaced apart from the first heat sink and coupled to a supply of cooling fluid, and wherein the first heat sink is positioned between the second heat sink and the heat source, the first heat sink being movable relative to the second heat sink between the first engaged position with the first heat sink engaged with the heat source and a second engaged position with the first heat sink engaged with the second heat sink to cool the first heat sink.

35. (Currently amended) The apparatus of claim 30 wherein the microelectronic workpiece is a first microelectronic workpiece, and wherein the control

unit is operatively coupled to the ~~disposition~~ deposition unit to influence a ~~disposition~~ deposition process carried out by the ~~disposition~~ deposition unit on at least one of the first microelectronic workpiece and a second microelectronic workpiece subsequently received at the ~~disposition~~ deposition unit.

36. (Original) The apparatus of claim 30 wherein the microelectronic workpiece is a first microelectronic workpiece, and wherein the control unit is operatively coupled to the annealing unit to influence an annealing process carried out by the annealing unit on at least one of the first microelectronic workpiece and a second microelectronic workpiece subsequently received at the annealing unit.

37. (Currently amended) The apparatus of claim 30 wherein the metrology unit is positioned external to a housing that at least partially encloses at least one of the ~~disposition~~ deposition unit ~~and~~ the ~~anneal~~ annealing unit.

38. (Original) The apparatus of claim 30, further comprising at least one of:

a stripping unit configured to receive the microelectronic workpiece and chemically strip at least part of the layered portion from the microelectronic workpiece;

a seed layer enhancement unit configured to receive the microelectronic workpiece and enhance characteristics of a seed layer disposed on the microelectronic workpiece;

a non-compliance unit configured to receive and support the microelectronic workpiece without changing the condition of the microelectronic workpiece when the condition of the layered portion of the microelectronic workpiece is outside a tolerance range; and

a pre-align unit configured to rotationally align the microelectronic workpiece.

39. (Currently amended) The apparatus of claim 30 wherein the metrology unit is configured to detect a condition of a layer ~~disposed~~ deposited by the ~~disposition~~ deposition unit.

40. (Currently amended) The apparatus of claim 30 wherein the ~~disposition~~ deposition unit is configured to ~~dispose~~ deposit at least one of a seed layer and a blanket layer on the microelectronic workpiece.

41. (Currently amended) The apparatus of claim 30 wherein the ~~disposition~~ deposition unit is configured to ~~dispose~~ deposit a layer of material by at least one of an electrochemical process, an electrolytic process and an electroless process.

42. (Original) A method for processing a microelectronic workpiece having a first side, a second side, and an outer perimeter between the first and second sides, the method comprising:

receiving the microelectronic workpiece at a metrology unit;

detecting a condition of a layered portion of the microelectronic workpiece at the metrology unit;

transmitting from the metrology unit to a control unit a condition signal representative of the condition;

based on the condition signal, transmitting a first control signal from the control unit to direct a transport unit to move the microelectronic workpiece to a stripping unit, or transmitting a second control signal to influence a process carried out by the stripping unit, or transmitting both the first control signal and the second control signal; and

stripping at least some of the layered portion at the stripping unit, wherein stripping includes:

introducing a first processing fluid at the first side of the workpiece;

introducing a second processing fluid at the second side of the workpiece;

driving the first processing fluid to contact the first side of the workpiece, the outer perimeter, and a peripheral margin of the second side of the workpiece; and

driving the second processing fluid to contact the second side of the workpiece substantially only at those portions of the second side interior to the peripheral margin of the second side.

43. (Original) The method of claim 42, further comprising selecting the first fluid to include an etchant.

44. (Currently amended) The method of claim 42 wherein the driving the first processing fluid includes driving the first processing fluid using ~~centripetal acceleration~~ centrifugal force resulting, at least in part, from rotation of the workpiece.

45. (Currently amended) The method of claim 42, further comprising ~~disposing~~ depositing the layered portion on the microelectronic workpiece at a ~~disposition~~ deposition unit.

46. (Currently amended) The method of claim 42, further comprising:

~~disposing~~ depositing the layered portion on the microelectronic workpiece at a ~~disposition~~ deposition unit by at least one of an electrochemical process, an electrolytic process, and an electroless process; and

influencing a ~~disposition~~ deposition process carried out by the ~~disposition~~ deposition unit by transmitting a signal from the control unit to the ~~disposition~~ deposition unit.

47. (Currently amended) The method of claim 42 wherein the microelectronic workpiece is a first microelectronic workpiece, and wherein the process further comprises:

~~disposing~~ depositing the layered portion on the microelectronic workpiece at a ~~disposition~~ deposition unit; and

transmitting a signal from the control unit to the ~~disposition~~ deposition unit to influence a ~~disposition~~ deposition process carried out by the ~~disposition~~ deposition unit on at least one of the first microelectronic workpiece and a second microelectronic workpiece received subsequently at the ~~disposition~~ deposition unit.

48. (Original) The method of claim 42 wherein transmitting a condition signal from the metrology unit includes transmitting a condition signal from a metrology unit external to a housing that at least partially encloses the stripping unit.

49. (Currently amended) The method of claim 42, further comprising moving the microelectronic workpiece to at least one of:

a seed layer enhancement unit configured to receive the microelectronic workpiece and enhance characteristics of a seed layer ~~disposed~~ deposited on the microelectronic workpiece;

a non-compliance unit configured to receive and support the microelectronic workpiece without changing the condition of the microelectronic workpiece when the condition of the layered portion of the microelectronic workpiece is outside a tolerance range;

an annealing unit configured to receive the microelectronic workpiece and anneal at least a portion of the microelectronic workpiece; and

a pre-align unit configured to rotationally align the microelectronic workpiece.

50. (Original) The method of claim 42 wherein detecting a condition of a layered portion of the microelectronic workpiece includes detecting a condition of at least one of a seed layer and a blanket layer on the microelectronic workpiece.

51. (Currently amended) A method for processing a microelectronic workpiece, comprising:

receiving the microelectronic workpiece in a reaction vessel of a ~~disposition~~ deposition unit;

~~disposing~~ depositing a material on the ~~disposition~~ deposition unit, wherein ~~disposing~~ depositing includes:

passing a primary fluid flow through the reaction vessel along a first flow path;

passing a secondary fluid flow through the reaction vessel along a second flow path, wherein the second flow path is separate from the first flow path through at least a portion of the reaction vessel;

applying an electrical potential to an electrode in the secondary fluid flow at a location where the secondary fluid flow is separate from the primary fluid flow, and wherein the method further comprises:

receiving the microelectronic workpiece at a metrology unit;

detecting a condition of a layered portion of the microelectronic workpiece at the metrology unit;

transmitting from the metrology unit to a control unit a condition signal representative of the condition;

based on the condition signal, transmitting a first control signal from the control unit to move the microelectronic workpiece, or transmitting a second control signal from the control unit to influence a process carried out by the ~~disposition~~ deposition unit, or transmitting both the first control signal and the second control signal.

52. (Currently amended) The method of claim 51, further comprising:

~~disposing~~ depositing the layered portion on the microelectronic workpiece at a ~~disposition~~ deposition unit by at least one of an electrochemical process, and an electrolytic process; and

influencing a ~~disposition~~ deposition process carried out by the ~~disposition~~ deposition unit by transmitting a signal from the control unit to the ~~disposition~~ deposition unit.

53. (Currently amended) The method of claim 51 wherein the microelectronic workpiece is a first microelectronic workpiece, and wherein the process further comprises:

~~disposing~~ depositing the layered portion on the microelectronic workpiece at a ~~disposition~~ deposition unit; and

transmitting a signal from the control unit to the ~~disposition~~ deposition unit to influence a ~~disposition~~ deposition process carried out by the ~~disposition~~ deposition unit on at least one of the first microelectronic workpiece and a second microelectronic workpiece received subsequently at the ~~disposition~~ deposition unit.

54. (Currently amended) The method of claim 51 wherein transmitting a condition signal from the metrology unit includes transmitting a condition signal from a metrology unit external to a housing that at least partially encloses the ~~seed layer enhancement~~ deposition unit.

55. (Original) The method of claim 51, further comprising moving the microelectronic workpiece to at least one of:

a seed layer enhancement unit configured to receive the microelectronic workpiece and enhance characteristics of a seed layer disposed on the microelectronic workpiece;

a stripping unit configured to receive the microelectronic workpiece and chemically strip at least part of the layered portion from the microelectronic workpiece;

a non-compliance unit configured to receive and support the microelectronic workpiece without changing the condition of the microelectronic workpiece when the condition of the layered portion of the microelectronic workpiece is outside a tolerance range;

an annealing unit configured to receive the microelectronic workpiece and anneal at least a portion of the microelectronic workpiece; and

a pre-align unit configured to rotationally align the microelectronic workpiece.

56. (Original) The method of claim 51 wherein detecting a condition of a layered portion of the microelectronic workpiece includes detecting a condition of a seed layer.

57. (Currently amended) A method for processing a microelectronic workpiece, comprising:

receiving the microelectronic workpiece in a reaction vessel of a ~~disposition~~ deposition unit;

~~disposing~~ depositing a material on the microelectronic workpiece~~disposition unit~~, wherein ~~disposing~~ depositing includes:

introducing at least one surface of the microelectronic workpiece into an electroplating bath;

providing a plurality of ~~anodes~~ electrodes in the electroplating bath, the plurality of ~~anodes~~ electrodes being spaced at different distances from the at least one surface of the microelectronic workpiece that is to be electroplated; and

for ~~each of~~ the individual electrodes~~plurality of anodes~~, inducing an electrical current between the ~~anode~~ electrode and the at least one surface of the microelectronic workpiece, the induced electrical

current being (a) based on an electrical current induced between the ~~anode~~ electrode and a previously electroplated microelectronic workpiece and (b) selected to improve on an electroplating result achieved for the previously electroplated microelectronic workpiece, and wherein the method further includes:

receiving the microelectronic workpiece at a metrology unit;

detecting a condition of a layered portion of the microelectronic workpiece at the metrology unit;

transmitting from the metrology unit to a control unit a condition signal representative of the condition; and

based on the condition signal, transmitting a first control signal from the control unit to direct a transport unit to move the microelectronic workpiece, or transmitting a control signal from the control unit to influence a process carried out by the ~~disposition~~ deposition unit, or transmitting both the first control signal and the second control signal.

58-59. (Cancelled)

60. (Currently amended) The method of claim 57 wherein transmitting a condition signal from the metrology unit includes transmitting a condition signal from a metrology unit external to a housing that at least partially encloses the ~~seed layer enhancement~~ deposition unit.

61. (Original) The method of claim 57, further comprising moving the microelectronic workpiece to at least one of:

a seed layer enhancement unit configured to receive the microelectronic workpiece and enhance characteristics of a seed layer disposed on the microelectronic workpiece;

a stripping unit configured to receive the microelectronic workpiece and chemically strip at least part of the layered portion from the microelectronic workpiece;

a non-compliance unit configured to receive and support the microelectronic workpiece without changing the condition of the microelectronic workpiece when the condition of the layered portion of the microelectronic workpiece is outside a tolerance range;

an annealing unit configured to receive the microelectronic workpiece and anneal at least a portion of the microelectronic workpiece; and

a pre-align unit configured to rotationally align the microelectronic workpiece.

62. (Original) The method of claim 57 wherein detecting a condition of a layered portion of the microelectronic workpiece includes detecting a condition of a seed layer.

63. (Currently amended) A method for processing a microelectronic workpiece, comprising:

receiving the microelectronic workpiece at a metrology unit;

detecting a condition of a layered portion of the microelectronic workpiece at the metrology unit;

transmitting from the metrology unit to a control unit a condition signal representative of the condition;

based on the condition signal, transmitting a first control signal from the control unit to direct a transport unit to move the microelectronic workpiece to an annealing unit, or transmitting a second control signal from the control unit to influence a process carried out by the annealing unit, or transmitting both the first control signal and the second control signal; and

annealing the microelectronic workpiece at the annealing unit, wherein annealing includes:

supporting the microelectronic workpiece relative to a heat source;

transferring heat from the heat source to the microelectronic workpiece; and

~~selectively transferring heat from the heat source to a heat sink to cool the heat source and~~ cooling the microelectronic workpiece ~~while the microelectronic workpiece is supported relative to the heat source~~.

64. (Original) The method of claim 63, further comprising moving at least one of the microelectronic workpiece and the heat source relative to the other to transfer heat from the heat source to the microelectronic substrate.

65. (Currently amended) The method of claim 63, further comprising moving ~~the~~ a heat sink relative to the heat source from a disengaged position to an engaged position with the heat sink contacting the heat source when the heat sink is in the engaged position to transfer heat from the heat source and the microelectronic workpiece.

66. (Currently amended) The method of claim ~~63~~ 65 wherein the heat sink is a first heat sink and wherein the method further comprises:

transferring heat from the first heat sink to a second heat sink by moving the first heat sink away from the heat source and proximate to a second heat sink; and

transferring heat away from the second heat sink.

67. (Currently amended) The method of claim 63, further comprising ~~disposing~~ depositing the layered portion on the microelectronic workpiece at a ~~disposition~~ deposition unit.

68. (Currently amended) The method of claim 63, further comprising:

~~disposing~~ depositing the layered portion on the microelectronic workpiece at a ~~disposition~~ deposition unit by at least one of an electrochemical process, an electrolytic process, and an electroless process; and

influencing a ~~disposition~~ deposition process carried out by the ~~disposition~~ deposition unit by transmitting a signal from the control unit to the ~~disposition~~ deposition unit.

69. (Currently amended) The method of claim 63 wherein the microelectronic workpiece is a first microelectronic workpiece, and wherein the process further comprises:

~~disposing~~ depositing the layered portion on the microelectronic workpiece at a ~~disposition~~ deposition unit; and

transmitting a signal from the control unit to the ~~disposition~~ deposition unit to influence a ~~disposition~~ deposition process carried out by the ~~disposition~~ deposition unit on at least one of the first microelectronic workpiece and a second microelectronic workpiece received subsequently at the ~~disposition~~ deposition unit.

70. (Original) The method of claim 63 wherein transmitting a condition signal from the metrology unit includes transmitting a condition signal from a metrology unit external to a housing that at least partially encloses the annealing unit.

71. (Currently amended) The method of claim 63, further comprising moving the microelectronic workpiece to at least one of:

a stripping unit configured to receive the microelectronic workpiece and chemically strip at least part of the layered portion from the microelectronic workpiece;

a seed layer enhancement unit configured to receive the microelectronic workpiece and enhance characteristics of a seed layer ~~disposed~~ deposited on the microelectronic workpiece;

a non-compliance unit configured to receive and support the microelectronic workpiece without changing the condition of the microelectronic workpiece when the condition of the layered portion of the microelectronic workpiece is outside a tolerance range; and

a pre-align unit configured to rotationally align the microelectronic workpiece.

72. (Currently amended) The method of claim 63 wherein detecting a condition of a layered portion of the microelectronic workpiece includes detecting a condition of at least one of a seed layer and a blanket layer ~~on~~ of the microelectronic workpiece.